Kerr Addison Mines Limited

Annual Report 1971

Directors

John R. Bradfield, LL.D., Toronto, Ont.
*Edward Futterer, Toronto, Ont.
K. C. Gray, Toronto, Ont.
Paul M. Kavanagh, Toronto, Ont.
Harold H. Leather, M.B.E., Hamilton, Ont.
J. P. W. Ostiguy, Montreal, Que.
R. V. Porritt, Toronto, Ont.
A. Powis, Toronto, Ont.
W. H. Rea, Toronto, Ont.
W. S. Row, Toronto, Ont.
W. Dent Smith, Wilmington, Del.
J. H. Stovel, Toronto, Ont.

Officers

W. S. Row, Chairman of the Board
J. H. Stovel, President
Paul M. Kavanagh, Vice-President
R. D. Stewart, Secretary
B. C. Bone, Treasurer
I. D. Bayer, Assistant Treasurer & Comptroller

*Deceased

Head Office and Exploration Office

Suite 1600-44 King St. West, Toronto 1, Ont.

Annual Meeting

Friday, April 21st, 1972
12:00 Noon at the Canadian Court,
King Edward Sheraton Hotel,
Toronto, Ontario.

Transfer Agents and Registrars

Canada Permanent Trust Company,
1901 Yonge Street, Toronto 7, Ont.

Registrar & Transfer Company,
140 Cedar Street, New York, N.Y.

Registrar & Transfer Company,
34 Exchange Place, Jersey City 2, N.J.

Auditors

Clarkson, Gordon & Co., P.O. Box 251,
Toronto-Dominion Centre, Toronto, Ontario.

Operating Personnel Including Subsidiary Companies

The Kerr Addison Mine
W. G. Hargrave, Manager
S. R. Fredeen, General Superintendent
and Chief Mining Engineer

The Normetal Mine
A. D. Dickson, General Manager
R. J. Allen, Manager

The Quemont Mine
A. D. Dickson, General Manager
W. D. Jamieson, Manager

Joutel Copper Mines Limited
A. D. Dickson, General Manager
D. B. Campbell, Manager

Agnew Lake Mines Limited
M. D. Rowswell, General Manager

Directors' Report to the Shareholders

Your Directors submit herewith the Annual Report of your Company for the year ended December 31, 1971.

After realizing a profit of $3,541,000 on the sale of the Company's interest in the Bokum-Keradamex Joint Venture and providing for a loss of $1,744,000 on abandonment of the Adanac Project near Atlin, B.C., earnings for 1971 declined to $6,094,000 or 64 cents per share as compared to 75 cents per share in 1970. Earnings from mining operations were reduced significantly due to lower copper prices, increased costs, the strong Canadian dollar and the closing of the Quemont mine during the fourth quarter when the ore was depleted. Dividends and interest income from investments other than subsidiary companies increased slightly to $2,970,000 or 31 cents per share. Interest on Agnew Lake debentures, which amounted to $804,000 in 1970, was deferred and not included in 1971 earnings.

After paying dividends of 45 cents per share the net value of current assets and investments at quoted market values, including investments in shares and debentures of Agnew Lake Mines Limited of 12.1 million dollars, amounted to $96,614,000 or $10.13 per share compared to $9.50 per share a year earlier.

The Managers' reports of the Kerr Addison, Normetal and Quemont mines are contained herein.

EXPLORATION AND DEVELOPMENT

Blue Hill Project

Following completion of a confirmatory drilling programme and a feasibility study on the Black Hawk zinc-copper property near Blue Hill, Maine it was decided to undertake production at a rate of 1,000 tons per day. At year end construction of the concentrator and surface plant was 30% completed and a decline entry to the mine had advanced 357 feet from its collar. Emphasis is being placed on the environmental aspects of the operation. Production is scheduled for late 1972. After financing the property into production the Company's U.S. subsidiary Kerramerican, Inc., will have a 60% interest.

A drilling programme was started in the fourth quarter to increase probable ore reserves in extensions of the known ore bodies and to test geophysical and geochemical anomalies. As a result, at year end the estimated diluted proven and probable reserves were increased by approximately 15% to 565,000 tons grading 16.8% zinc and 0.62% copper and 245,000 tons grading 2.0% copper. In addition there are possible reserves of 650,000 tons of high-grade zinc ore and 900,000 tons of copper ore in extensions of the proven and probable zones. Expectations for additional high-grade zinc and copper ore are excellent.

New Mexico Joint Ventures

Keradamex, Inc., a wholly owned U.S. subsidiary of the Company sold its 13% interest in the Bokum-Keradamex Joint Venture in New Mexico but retained its 26% interest in two deposits totalling 40 million pounds U_3O_8 at depths of 2,700-3,000 feet held by the adjoining Fernandez Joint Venture.

An engineering evaluation was initiated including a programme to obtain rock and hydrological characteristics in each of the two deposits.

Bouzan Joint Venture

The Bouzan Joint Venture with The Patino Mining Corporation in the Chibougamau area commenced a cross-cut on the 1,000 foot level to develop a copper zone previously indicated by both surface and underground diamond drilling to contain approximately 160,000 tons grading 2.5% copper after dilution.

Adanac Project

Substantial improvements in tonnage and grade of the Adanac molybdenum property in northern British Columbia were more than offset by increases in estimated capital and operating costs. Because it was considered that the project was not viable at this time the option agreement was abandoned.

General

Exploration programmes carried out in Canada and the United States, and with Noranda Mines Limited in the United Kingdom and Ireland yielded a number of properties

warranting follow-up work. Late in the year Kerr Addison made tentative agreements concerning the exploration of the 650 square mile Advocate Concession in Newfoundland and the zinc-lead-silver property in the Mayo district, Yukon, owned by Bullion Mountain Mining Company Limited. This year another aggressive exploration effort in excess of $1 million is planned.

METAL MARKETS

Gold

The tumult in the international exchange markets during 1971 was clearly reflected in the markets for gold. The London Free Market opened the year at $37.65 U.S. per ounce and by May was selling at about $40. The obvious strength of certain currencies, notably the deutsche mark and yen, led to suspicion of the U.S. dollar and the gold price strengthened to about $43 by the first half of August. The suspension of convertibility of United States currency on August 15 caused confusion in the markets and erratic but generally firm prices for gold.

As the year closed new official parities were announced, which included a de facto rise in the official price to $38 U.S. The free market price at year end was $43 and since the year end has increased to over $47 per ounce.

While the change in the official price was modest, it set a most significant precedent. The many assertions over the past two decades that "the U.S. dollar is as good as gold" were proven wrong. The future system of international payments will probably be based more on gold and other assets whose values are guaranteed in terms of gold and less on dollars. The way is open for possible further revaluations of gold in the future. Meanwhile industrial demand for gold continues to grow and projections point to further increases in the free market price over the next few years.

Copper

Last year was marked by economic uncertainty and loss of confidence as growth rates declined in the major industrial countries. This was reflected in reduced demand and weaker markets for metals generally.

Consumption of copper was lower and production capacity increased. However, actual refined production was reduced by the U.S. industry strike, lower output in Zambia and problems in Peru and Chile. The London Metal Exchange price declined from 58 cents U.S. per pound in March to 47½ cents at the year end while the U.S. producers' prices moved from 50⅜ cents to 52¾ cents in March and then to 50¼ cents in November. Prices in Canada started at 51 cents, rose to 53 cents in March and then to 53¾ cents before being reduced to 50⅜ cents in November.

Zinc

Rising demand for zinc in the United States resulted in an overall increase in world consumption. Production was influenced by continued smelter cutbacks and the closure of four U.S. smelters and two in the United Kingdom. Metal stocks declined, particularly in the United States where imports were limited by the Phase I controls and surcharge.

Prices reflected the firmer trend rising from 15 cents to 17 cents U.S. per pound by July in North America, and were increased overseas in June to the equivalent of 17.7 cents U.S.

Uranium

Prices weakened as new sources of low cost uranium became available. Further pressure on prices occurred when the U.S. Atomic Energy Commission proposed the release of surplus stockpiled uranium.

Free world annual uranium requirements remain well below world production capacity. This situation is expected to continue throughout most of the seventies. Siting problems are still the major delaying factor. However the generation of electrical power by nuclear reactors is now firmly established. At present there are 91 nuclear reactors in operation and last year an additional 49 were ordered. As this trend continues it is expected that demand for uranium will surpass the available supply by the end of this decade.

SUBSIDIARY AND ASSOCIATED COMPANIES

Joutel Copper Mines Limited

Net income for the year declined from $1,280,000 in 1970 to $476,000 reflecting a substantial reduction in the price of copper.

While copper production and operating costs were maintained at 1970 levels, the average price received for copper during the year was 49 cents per pound compared to 64 cents a year earlier. Dividends totalling 40 cents per share were paid during the year and working capital was reduced by $341,000.

The average daily tonnage treated was 655 tons containing 2.25% copper. Ore reserves at year end were estimated to be 148,000 tons containing 2.19% copper and 200,000 tons containing 11.5% zinc.

Icon Sullivan Joint Venture

The average daily tonnage milled at the Canadian Merrill mill was 607 tons grading 3.0% copper compared to 604 tons grading 2.8% during 1970. Copper recovery in the mill was 97.7%.

The heavy-media preconcentration plant treated 260,053 tons grading 1.5% copper and produced 187,611 tons grading 2.7% copper, representing a 48% rejection of material and a copper recovery of 95%.

Ore reserves at year end were approximately 625,000 tons grading 2.5% copper compared to 710,000 tons grading 2.35% copper at the end of 1970.

Profit for the year before depreciation and amortization was $1,460,000 compared to $3,071,000 in 1970. Kerr Addison's net interest in the Joint Venture is 21.4%.

Agnew Lake Mines Limited

Development work and diamond drilling were completed in January 1971 in accordance with the plan to suspend underground operations because of prevailing low uranium prices. The underground workings were allowed to flood and the surface plant placed on a care and maintenance basis.

Vangorda Mines Limited

Kerr Addison owns about two-thirds of the issued shares of this Company which holds 51 claims in the Yukon Territory. No exploration was done on the property and the previously estimated tonnage of 9,400,000 tons averaging 3.2% lead, 4.9% zinc, 0.3% copper, 1.76 ounces of silver and 0.02 ounces of gold per ton remains unchanged.

The difficult metallurgy of the deposit, its small size and inaccessibility combine to make the property non-economic at this time.

* * *

One must view with concern the present attitude of government to the business community. At a time when policies are needed to encourage industry to undertake investments and risks, especially in the natural resources field, government is bringing forth legislation such as the new Income Tax Act and the proposed Competition Act and Canada Labour Code which will inhibit the very growth which instead should be assisted. Government and business, in an atmosphere of mutual confidence, should develop policies which will promote economic growth through the stimulation and encouragement of the business community.

If, as expected, the U.S. Congress revalues gold to $38.00 U.S. per ounce, it is hoped that the Canadian Government will not alter the amount of assistance payments under the Emergency Gold Mine Assistance Act as the new price would only yield to producers the same revenue received prior to May 1970 when the Canadian dollar was allowed to float. It is also important that the Act be extended from June 1973 through 1975 as implied in the Government announcement of August, 1970, so that operating mines can intelligently plan ahead, and proceed with necessary development work.

* * *

During September this Company suffered a grievous loss in the untimely death of Mr. Edward Futterer who had been with the Company since 1964 and a Director and Vice-President since 1967. He contributed valued advice and service not only to this Company, but to the entire mining industry through the work he did to further advanced education for students entering our industry.

* * *

It is with pleasure that your Directors record their sincere appreciation of the work accomplished by the management and employees of the Kerr Addison Group of Companies.

On behalf of the Board

W. S. Row
Chairman

J. H. Stovel
President

February 4, 1972

Toronto, Ontario

Consolidated Statement of Operations

For the year ended December 31, 1971 (with comparative figures for 1970)

	1971	1970
Mine operations:		
Value of production	$17,949,331	$20,426,531
Cost of metal production (net of recoveries under the Emergency Gold Mining Assistance Act of $820,000 in 1971; $995,000 in 1970)	14,908,266	13,970,872
	3,041,065	6,455,659
Investment and other income:		
Joutel Copper Mines Limited — Equity in earnings	385,803	895,077
Agnew Lake Mines Limited — Interest on debentures (note 1)		803,745
Icon Sullivan Joint Venture — Equity in earnings	197,684	570,617
Dividends and interest income on marketable securities, investments in other mining companies and short-term commercial notes	2,969,733	2,944,279
	3,553,220	5,213,718
	6,594,285	11,669,377
Deduct:		
Administrative and general expenses	413,402	349,231
Outside exploration expenses	1,378,388	1,357,540
Depreciation	245,598	332,601
Income and mining taxes	714,826	2,202,518
	2,752,214	4,241,890
Profit before the following	3,842,071	7,427,487
Add (deduct):		
Gains on sale of investments and fixed assets (note 3)	454,595	65,023
Loss on abandonment of Adanac Project (net of income tax reduction of $964,000)	(1,743,532)	
Profit on sale of interest in Bokum-Keradamex Joint Venture (net of estimated income taxes of $1,905,000)	3,540,737	
Adjustment (increase) to equity in Joutel Copper Mines Limited relating to previous years		203,992
Provision for loss on investment in subsidiary, Kerralda Mines Limited		(530,000)
Net income for the year	$ 6,093,871	$ 7,166,502
Net income per share	64¢	75¢

(See accompanying notes to consolidated financial statements)

Kerr Addison Mines Limited

(Incorporated under the laws of Ontario) and its wholly-owned subsidiaries

Consolidated Balance Sheet

December 31, 1971
(with comparative figures at December 31, 1970)

Assets	1971	1970
Current:		
Cash and short-term commercial notes	$ 6,995,037	$ 405,483
Marketable securities, at cost (quoted market value 1971 — $12,781,000; 1970 — $13,507,000)	10,240,197	10,713,679
Concentrates, bullion and metals sold, in transit and on hand at estimated net returns under sales contracts	4,901,372	4,393,684
Accounts and interest receivable	1,181,848	2,314,602
Supplies and materials, at cost	1,018,688	1,496,929
Prepaid expenses	128,668	163,823
Total current assets	24,465,810	19,488,200
Investments:		
Partially owned subsidiary companies (note 1)	13,599,890	14,566,336
Other mining companies (note 2)	29,399,395	29,399,395
Icon Sullivan Joint Venture (at equity in net book value of its assets)	628,111	621,287
Sundry, at cost (note 5)	994,376	1,014,264
	44,621,772	45,601,282
Fixed (note 3):		
Buildings, plant and equipment, at cost	20,914,275	30,913,801
Less accumulated depreciation	20,377,390	30,104,994
	536,885	808,807
Mining claims and properties, at nominal value	1	1
	536,886	808,808
Other:		
Deferred exploration expenditures	1,730,264	4,282,735
Blue Hill Project (note 4)	2,191,181	
	3,921,445	4,282,735
	$73,545,913	$70,181,025

(See accompanying notes to consolidated financial statements)

Liabilities	1971	1970
Current:		
Accounts payable and accrued charges	$ 2,357,807	$ 1,758,086
Income and mining taxes payable	1,958,541	229,247
Balance of dividends payable	187,000	254,996
Total current liabilities	4,503,348	2,242,329
Deferred income taxes	139,500	839,000
Shareholders' equity:		
Capital stock (note 5) — Authorized: 12,500,000 shares of no par value Issued: 9,534,449 shares	41,460,422	41,460,422
Earned surplus	27,442,643	25,639,274
	68,903,065	67,099,696
	$73,545,913	$70,181,025

On behalf of the Board:

W. S. ROW, Director

J. H. STOVEL, Director

Auditors' Report

To the Shareholders of Kerr Addison Mines Limited:

We have examined the consolidated balance sheet of Kerr Addison Mines Limited and its wholly-owned subsidiaries as at December 31, 1971 and the consolidated statements of operations, earned surplus and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these financial statements present fairly the financial position of the companies as at December 31, 1971 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Clarkson, Gordon & Co., Chartered Accountants
Toronto, Canada, February 4, 1972.

Consolidated Statement of Earned Surplus

For the year ended December 31, 1971
(with comparative figures for 1970)

	1971	1970
Balance at beginning of year	$25,639,274	$23,809,263
Add net income for the year	6,093,871	7,166,502
	31,733,145	30,975,765
Deduct dividends (45¢ per share in 1971; 56¢ per share in 1970)	4,290,502	5,336,491
Balance at end of year	$27,442,643	$25,639,274

Consolidated Statement of Source and Application of Funds

For the year ended December 31, 1971
(with comparative figures for 1970)

	1971	1970
Source of funds:		
From operations —		
Net income for the year	$ 6,093,871	$ 7,166,502
Depreciation	245,598	332,601
Deferred exploration expenditures on properties abandoned and sold	3,144,179	
Increase (decrease) in deferred income taxes	(699,500)	600,000
	8,784,148	8,099,103
Excess of cash distributions by Joutel Copper Mines Limited and Icon Sullivan Joint Venture over equity in earnings for current year	846,210	581,694
Decrease (increase) in investment in other unconsolidated subsidiaries	113,412	(204,176)
Issue of shares		105,000
	9,743,770	8,581,621
Application of funds:		
Dividends	4,290,502	5,336,491
Expenditures on Blue Hill Project (note 4)	2,191,181	
Deferred exploration expenditures	591,708	3,148,486
Increase (decrease) in fixed assets (net)	(26,324)	227,188
Increase (decrease) in sundry investments	(19,888)	257,104
Agnew Lake Mines 7% debentures		1,200,000
	7,027,179	10,169,269
Increase (decrease) in working capital	2,716,591	(1,587,648)
Working capital, at beginning of year	17,245,871	18,833,519
Working capital, at end of year	$19,962,462	$17,245,871

(See accompanying notes to consolidated financial statements)

Notes to Consolidated Financial Statements

December 31, 1971

1. Basis of Consolidation and Statement Presentation

These statements consolidate the accounts of the Company and its wholly-owned subsidiaries, Normetal Mines Limited, Quemont Mines Limited, Keradamex, Inc. and Kerramerican, Inc. The accounts of the United States subsidiaries have been translated into Canadian dollars at current rates of exchange except for non-current assets which have been translated at historical rates.

The accounts of partially-owned subsidiaries are not consolidated but are carried as an investment on the balance sheet as follows:

	1971	1970
Agnew Lake Mines Limited (80% owned)		
Shares, at cost (less tax reductions of $137,000 relating thereto)	$ 126,484	$ 126,484
7% debentures, at cost	12,000,000	12,000,000
	12,126,484	12,126,484
Joutel Copper Mines Limited (63.3% owned)		
Shares, at cost	1,529,236	1,529,236
Equity in accumulated earnings less dividends received	(146,595)	706,439
	1,382,641	2,235,675
Kerralda Mines Limited (63.3% owned)		
Advances net of provisions for losses	45,694	159,681
Vangorda Mines Limited (69% owned)		
Advances	45,070	44,495
Inactive subsidiary companies, at nominal value	1	1
	$13,599,890	$14,566,336

The accounts of Agnew Lake are not consolidated because of the minority interest and the fact that the company has not commenced operations. Agnew Lake has suspended development of its property because of prevailing low prices in the world uranium market. The company is confident that future demands for uranium resulting from increased requirements for nuclear power generation will permit the Agnew Lake property to operate profitably and plans to resume development when uranium sales contracts have been arranged at favourable prices. In the meantime the property is being held on a care and maintenance basis. Payment of interest on Agnew Lake's outstanding debentures has been deferred for three years from January 1, 1971; interest accruing on these debentures for 1971 ($840,000) has accordingly not been taken into income in the consolidated statement of operations.

To December 31, 1971, Agnew Lake has expended a total of $5,692,738 on buildings and equipment and a total of $9,243,548 on exploration, development and other expenditures, excluding 1971 interest accruing on its outstanding debentures of $1,050,000.

In addition to the Company's investment in Agnew Lake, deferred exploration expenditures include amounts aggregating $567,000 expended on uranium properties adjacent to Agnew Lake. As in the case of the Agnew Lake property, further development of these claims has been suspended.

The accounts of Joutel, Kerralda and Vangorda are not consolidated because of the substantial minority interest. The Company's equity in earnings of Joutel is, however, reflected in the statement of operations. Vangorda has had no profits or losses to date, all expenditures being classified as deferred exploration and development in its accounts. Operations at the Kerralda property were terminated during the year.

2. Investments in Other Mining Companies

These investments represent shares and bonds of other mining companies which are being held on a relatively long-term basis. Such investments, which are carried at cost of $29,399,395, had a quoted market value on December 31, 1971 of approximately $60,437,750 (computed by pricing the individual holdings at the closing market quotations on that date). This amount does not necessarily represent the value of these holdings, which may be more or less than that indicated by market quotations.

3. Disposal of Fixed Assets

During the last quarter of 1971, mining operations at Quemont Mines Limited ceased when its ore was depleted, and the company disposed of fixed assets having a net book value of $88,262 (original cost of $9,878,017 less accumulated depreciation of $9,789,755) on which a gain of $277,875 net of related income taxes of $138,000 was realized.

4. Blue Hill Project

During the year, the Company, through its wholly-owned U.S. subsidiary, Kerramerican, Inc., undertook to put into production the Black Hawk copper-zinc property near Blue Hill, Maine, in which it will acquire a 60% interest by financing the property to minimum production levels, as defined, by September 1973. To December 31, 1971 total deferred expenditures on fixed assets, development and preproduction amounted to $2,191,181 and a further $1,000,000 had been committed at that date.

5. Share Capital

Under the Company's share purchase plan, shares were sold to a Trustee in 1970 at the then current market price for resale to employees financed by an interest free loan from the Company. At December 31, 1971 this loan, amounting to $105,000, is included with "Sundry Investments" on the balance sheet and is repayable within a period of six years.

Employees' options were outstanding at December 31, 1971 covering a total of 19,000 shares, of which 13,000 shares are exercisable at a price of $13.30 per share up to July 23, 1979 and the balance of 6,000 shares are exercisable at a price of $8.14 up to July 21, 1981.

6. Remuneration of Directors and Senior Officers

Total direct remuneration paid by the Company and its consolidated subsidiaries to directors and senior officers during the year ended December 31, 1971 amounted to $221,600 ($214,075 in 1970). Amounts paid by unconsolidated subsidiary companies totalled $1,200 in 1971 and $1,400 in 1970.

Manager's Report: Kerr Addison Mine

Production:
During the year 1971, 344,100 tons of ore were milled at an average rate of 943 tons per day as compared to 935 in 1970. The average grade was 0.41 ounces per ton, the same as the previous year. The value of production was $5.87 million, down $140,000 from production of $6.01 million in 1970 due to the strong Canadian dollar. The overall recovery of gold in the milling operation was 97.96%.

During the latter part of the year 16,800 ounces of gold were sold on the Free Market at an average price of $44.03 per ounce. The remaining 122,000 ounces were sold to the Royal Mint for $35.44 per ounce with an estimated rate of assistance under the Emergency Gold Mining Assistance Act of $6.72 per ounce for a total realization of $42.16 per ounce.

There was an increase in labour costs effective April 1st, 1971. The prices of materials remained stable for nine months but increased approximately seven percent in the last quarter.

Mine Development and Mining:
Drifting, raising and cross-cutting of 1,103 feet were related to stope and pillar development. Stoping operations were confined to the Numbers 6, 14, 16 and 21 ore bodies between the 1300 and 4600-foot levels.

Ore broken by square-set methods accounted for 80.4% of all broken ore, up slightly from 79.7% in 1970. Pillar mining represented 20.3% of tonnage compared to 24.3% in 1970.

Ore Reserves:
At the end of 1971, estimated ore reserves including allowance for dilution, were as follows:

	Tons	Ounces of Gold Per Ton
Total Ore Reserves at the end of 1970	2,040,000	0.531
Total Ore Reserves at the end of 1971	1,609,000	0.568

In addition to the tonnage milled, 86,700 tons averaging 0.21 ounces gold per ton were removed from ore reserves for economic reasons.

General:
The total work force decreased from 564 to 498 men. Retention of employees with one or more years of service was 82.4% at December 31, 1971. It is necessary to continue a training program for miners. With the co-operation of the Department of Labour, 406 men have been trained since 1967.

Due to increased tonnage mined by square-set methods timber is the major material cost item. Six million seven-hundred thousand board feet of timber were consumed, amounting to 19.5 board feet per ton milled.

From the commencement of milling in May, 1938 to the end of 1971, production was 9,051,140 ounces of gold with a value of $327,564,300 from the treatment of 33,631,900 tons of ore with an average gold content of 0.27 ounces per ton.

The co-operation of the men at the mine, their immediate supervisors and Department Heads is appreciated. We all acknowledge the continued support of the Senior Officers and Directors.

Respectfully submitted,

W. G. Hargrave,
Manager.

January 26, 1972.

Manager's Report: Normetal Mine

During 1971, the concentrator treated 331,166 tons of ore averaging 1.76% copper, 5.78% zinc, 0.028 ozs. gold and 1.50 ozs. silver per ton from the Normetal property and 4,132 tons averaging 2.20% copper, 2.37% zinc, 0.011 ozs. gold and 1.22 ozs. silver per ton from the adjoining Normetmar property. In addition 1,485 tons of oxidized ore averaging 4.30% copper, 0.062 ozs. of gold and 3.90 ozs. silver were shipped direct to the smelter. The pyrite plant operated intermittently to satisfy demand. There were 2,224 tons of zinc concentrates stockpiled at the mine because of the limit placed on shipments during the last quarter of the year.

Production amounted to 11,068,237 pounds of copper, 6,129 ozs. of gold, 321,482 ozs. of silver in copper concentrate and direct smelted ore; 32,794,494 pounds of zinc in zinc concentrate and 27,090 tons of pyrite concentrate averaging 49.98% sulphur.

Milling averaged 919 tons per day compared to 954 tons in 1970. The lower daily tonnage was due to the two week vacation shut down when repairs were made to Nos. 3 and 4 shafts. Mill feed during the year was 18% from No. 3 shaft, 55% from No. 4 shaft and 27% from No. 5 shaft compared to 18, 48 and 33% respectively and 1% from No. 2 shaft in 1970. Operating cost per ton milled was 8.7% higher due to increased labour rates and cost of supplies, increased expenditure on pollution control and lower tonnage milled.

Ore reserves as at December 31, 1971 after allowing for 15% dilution are estimated as follows:

		Grade %	
	Tons	Copper	Zinc
Copper-zinc ore	355,300	2.44	2.03
Zinc ore	119,600	0.28	12.55
	474,900	1.90	4.67

Ore reserves showed a decline of 231,100 tons during the year after milling 331,166 tons. The zinc content of ore reserves is down because some of the zinc stopes are not producing the estimated grade.

The railway handled 93,118 tons of concentrates and 1,949 tons of freight. Work on pollution control included 3,000 feet of ditching, chemical grouting of one earth dam, addition of lime to the mine water and mill tailings, removal of sludge from settling ponds and re-seeding about 5 acres of tailings.

The productivity per man shift was 2.75 compared with 2.81 in 1970. The operating force at year-end was 482 compared to 499 at the end of 1970. The labour turnover was 9.45% compared with 10.3% in 1970. At the end of 1971 there were 92.8% of the employees with more than one year's service.

From the commencement of milling in September 1937 to the end of 1971 production has been as follows:

Ore milled	10,140,400 Tons
Ore shipped direct to smelter	2,900 Tons
Copper contained in copper concentrate & ore shipped	228,600 Tons
Zinc contained in zinc concentrate	529,700 Tons
Gold produced	163,340 Ounces
Silver produced	13,951,300 Ounces
Pyrite concentrates shipped	581,300 Tons
Ore milled for others	43,360 Tons

I am pleased to record my thanks and appreciation for the services rendered by the staff and employees at the mine. The assistance and support of the Officers and Directors of the Company are greatly appreciated.

Respectfully submitted,

R. J. Allen,
Manager.

January 13, 1972.

Manager's Report: Quemont Mine

Mining and milling operations ceased on November 11th when the ore was exhausted.

During 1971 the concentrator treated 332,916 tons of Quemont ore averaging 0.116 oz. gold and 1.03 oz. silver per ton, 0.78% copper, 2.06% zinc and 42.0% pyrite.

Production amounted to 4,722,111 pounds of copper, 23,925 ounces of gold, 125,889 ounces of silver in copper concentrate; 4,511 ounces of gold and 57,756 ounces of silver in bullion; 9,896,223 pounds of zinc in concentrate and 129,431 tons of pyrite concentrate.

The mill treated 1,057 tons per day during the production period compared to 821 tons in 1970. Sub-level stoping produced 77% of the tonnage and 23% came from cut-and-fill stopes.

Labour productivity was 6.5 tons per man-shift compared to 4.2 in 1970. The total work force was reduced from 317 at the beginning of the year to 127 on November 11th when production ceased. At the year-end there were 31 persons employed in the final closing down operations.

During the production period 1949 to 1971, the plant treated 15,349,000 tons of ore averaging 0.157 oz. gold and 0.90 oz. silver per ton, 1.31% copper and 2.43% zinc.

Products from this ore were concentrates and bullion containing:

Copper	184,800 tons
Gold	1,918,300 ounces
Silver	7,941,700 ounces
Zinc	280,300 tons
Pyrite concentrate (to sulphuric acid plants)	3,692,000 tons

Treatment of Delbridge ore on a custom basis ceased on September 27th when ore reserves were exhausted at that property. Total Delbridge ore treated during the year amounted to 154,172 tons.

Mining and milling of Kerralda ore was terminated on June 19th. A total of 21,705 tons was treated during 1971.

Nearly all the staff obtained or were offered employment in other companies in the Noranda group. The co-operation of both the Federal and Provincial Departments of Labour, together with a generous terminal pay allowance, permitted those hourly rated employees who could not be transferred to other companies within the Noranda group, to relocate without difficulty.

Sale of the Quemont plant and equipment was nearing completion at year-end with proceeds on disposal expected to exceed $700,000.

The services rendered by the Department Heads, staff and employees at the mine are gratefully acknowledged. The continued support of the Officers and Directors of the Company is greatly appreciated.

Respectfully submitted,

W. D. Jamieson,
Manager.

January 17, 1972.

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